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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/687,421	10/16/2003	Wei Han	PH 7474 NP	7985

23914 7590 12/14/2005

STEPHEN B. DAVIS  
BRISTOL-MYERS SQUIBB COMPANY  
PATENT DEPARTMENT  
P O BOX 4000  
PRINCETON, NJ 08543-4000

EXAMINER

TRUONG, TAMTHOM NGO

ART UNIT	PAPER NUMBER
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1624

DATE MAILED: 12/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/687,421	<b>Applicant(s)</b> HAN ET AL.	
	<b>Examiner</b> Tamthom N. Truong	<b>Art Unit</b> 1624	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 9-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-7 and 9-13 are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

It is noted that there is no claim 8.

Claims 1-7 and 9-13 are pending.

*Election/Restrictions*

Restriction to one of the following inventions is required under 35 U.S.C. 121:

**Group 1:** Claims 1-7 (in part), drawn to compounds of formula I wherein:

The M-fused-pyrimidinone ring is **quinazolin-4-one**;

P<sub>4</sub> is -G<sub>1</sub>-G, and G is phenyl;

classified in classes 514 and 544, various subclasses depending on substituents.

**Group 2:** Claims 1-7 (in part), drawn to compounds of formula I wherein:

The M-fused-pyrimidinone ring is **quinazolin-4-one**;

P<sub>4</sub> is -G<sub>1</sub>-G, and G is pyridinyl;

classified in classes 514 and 544, various subclasses depending on substituents.

**Group 3:** Claims 1-7 (in part), drawn to compounds of formula I wherein:

The M-fused-pyrimidinone ring is **pyrido[3,2-d]pyrimidin-4-one**;

P<sub>4</sub> is -G<sub>1</sub>-G, and G is pyridinyl;

classified in classes 514 and 544, various subclasses depending on substituents.

**Group 4:** Claims 1-7 (in part), drawn to compounds of formula I wherein:

The M-fused-pyrimidinone ring is **pyrido[4,3-d]pyrimidin-4-one**;

P<sub>4</sub> is -G<sub>1</sub>-G, and G is pyridinyl;

classified in classes 514 and 544, various subclasses depending on substituents.

- Group 5:** Claims 1-7 (in part), drawn to compounds of formula I wherein:
- The M-fused-pyrimidinone ring is **pyrido[3,4-d]pyrimidin-4-one**;
- P<sub>4</sub> is -G<sub>1</sub>-G, and G is pyridinyl;
- classified in classes 514 and 544, various subclasses depending on substituents.
- Group 6:** Claims 1-8 (in part), drawn to compounds of formula I wherein:
- The M-fused-pyrimidinone ring is **6H-[1,2,5]-oxadiazolo-[3,4-d]pyrimidin-7-one**;
- P<sub>4</sub> is -G<sub>1</sub>-G, and G is pyridinyl;
- classified in classes 514 and 544, various subclasses depending on substituents.
- Group 7:** Claims 1-7 (in part), drawn to compounds of formula I wherein:
- The M-fused-pyrimidinone ring is **isoxazolo-[4,3-d]pyrimidin-7-one**;
- P<sub>4</sub> is -G<sub>1</sub>-G, and G is pyridinyl;
- classified in classes 514 and 544, various subclasses depending on substituents.
- Group 8:** Claims 1-7 (in part), drawn to compounds of formula I wherein:
- The M-fused-pyrimidinone ring is **6H-thiazolo-[5,4-d]pyrimidin-7-one**;
- P<sub>4</sub> is -G<sub>1</sub>-G, and G is pyridinyl;
- classified in classes 514 and 544, various subclasses depending on substituents.
- Group 9:** Claims 1-7 (in part), drawn to compounds of formula I wherein:
- The M-fused-pyrimidinone ring is **purin-6-one**;
- P<sub>4</sub> is -G<sub>1</sub>-G, and G is pyridinyl;
- classified in classes 514 and 544, various subclasses depending on substituents.

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**Group 10:** Claims 1-7 (in part), drawn to compounds of formula I wherein:  
The M-fused-pyrimidinone ring is **3H-thieno-[3,2-d]pyrimidin-4-one**;  
P<sub>4</sub> is -G<sub>1</sub>-G, and G is pyridinyl;  
classified in classes 514 and 544, various subclasses depending on substituents.

**Group 11:** Claims 1-7 (in part), drawn to compounds of formula I wherein:  
The M-fused-pyrimidinone ring is **3,5-dihydro-pyrrolo-[3,2-d]pyrimidin-4-one**;  
P<sub>4</sub> is -G<sub>1</sub>-G, and G is pyridinyl;  
classified in classes 514 and 544, various subclasses depending on substituents.

**Group 12:** Claims 1-7 (in part), drawn to compounds of formula I wherein:  
The M-fused-pyrimidinone ring is **1,6-dihydro-pyrazolo-[4,3-d]pyrimidin-7-one**;  
P<sub>4</sub> is -G<sub>1</sub>-G, and G is pyridinyl;  
classified in classes 514 and 544, various subclasses depending on substituents.

**Group 13:** Claims 1-7 (in part), drawn to compounds of formula I wherein:  
The M-fused-pyrimidinone ring is **3H-furo-[3,2-d]pyrimidin-4-one**;  
P<sub>4</sub> is -G<sub>1</sub>-G, and G is pyridinyl;  
classified in classes 514 and 544, various subclasses depending on substituents.

**Group 14:** Claims 1-6 (in part), drawn to the remaining compounds of formula I that are not in the above group (e.g., G is not pyridinyl); classified in classes 514, 544, 546,

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548, and 549, various subclasses depending on substituents. Further restriction and election of species will be required if this group is elected.

**Group 15:** Claims 9-13, drawn to method of treating a thromboembolic disorder, classified in class 514, various subclasses. Further restriction and election of species will be required if this group is elected.

Inventions of Groups 1-14 are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are distinct from each other by the combination of *pyrimidinone fused with ring M*, and the ring represented by G (or formula IIa, or IIb).

The inventions of Groups 1-14 have a common core of *pyrimidinone*, which does not sufficiently define the invention, and is not a contribution to the art. It is the combination of the rings represented by M and G that gives compounds of each group their unique physical, chemical properties and biological activities. Depend on what they represent, the claimed formula would have different structure. Thus, a reference anticipated or rendered obvious compounds of one group would not do so to those of other groups. Therefore, a separate search is required for each group.

The invention of Group 15 is drawn to a method of treating a thromboembolic disorder which requires additional search and examination beyond the scope of the claimed compound. A reference reading on the compounds would not necessarily read on the claimed method. Therefore, the search and examination for all 15 groups would impose a serious burden on the

examiner in charge of this invention. Note, a preliminary search in EAST yields a total of 2,792 hits which clearly shows an overwhelming number of references for consideration.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art due to their recognized divergent subject matter, and to search as well as examining the 15 distinct invention would indeed impose a serious burden on the examiner in charge of the invention, restriction for examination purposes as indicated is proper.

The examiner has required restriction between product and method claims. Where applicant elects claims directed to the product, and a product claim is subsequently found allowable, withdrawn method claims that depend from or otherwise include all the limitations of the allowable product claim will be rejoined in accordance with the provisions of MPEP § 821.04. **Method claims that depend from or otherwise include all the limitations of the patentable product** will be entered as a matter of right if the amendment is presented prior to final rejection or allowance, whichever is earlier. Amendments submitted after final rejection are governed by 37 CFR 1.116; amendments submitted after allowance are governed by 37 CFR 1.312.

In the event of rejoinder, the requirement for restriction between the product claims and the rejoined method claims will be withdrawn, and the rejoined method claims **will be fully examined for patentability in accordance with 37 CFR 1.104**. Thus, to be allowable, the **rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103, and 112**. Until an elected product claim is found allowable, an otherwise proper restriction requirement between product claims and method claims may be maintained.

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Withdrawn method claims that are not commensurate in scope with an allowed product claim will not be rejoined. See "Guidance on Treatment of Product and Process Claims in light of In re Ochiai, In re Brouwer and 35 U.S.C. § 103(b)," 1184 O.G. 86 (March 26, 1996). Additionally, in order to retain the right to rejoinder in accordance with the above policy, Applicant is advised that the method claims should be amended during prosecution either to maintain dependency on the product claims or to otherwise include the limitations of the product claims. **Failure to do so may result in a loss of the right to rejoinder.** Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

A telephone call was made to Dr. Jing S. Belfield on 11-30-05 to request an oral election to the above restriction requirement, but a written restriction was requested.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).



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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamthom N. Truong whose telephone number is 571-272-0676. The examiner can normally be reached on M-F (9:30-6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James O. Wilson can be reached on 571-272-0661. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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12-09-05

  
**Tamthom N. Truong**  
**Examiner**  
**Art Unit 1624**

  
**JAMES O. WILSON**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 1600**